

## LETTER

## "Congenital Foot Deformity in Caravaggio's Scholar Painting: A Likely Diagnosis of FATCO Syndrome"

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**Keywords:** Caravaggio; art painting; foot deformity; FATCO syndrome; medical diagnosis; Saint Peter

Congenital foot deformities are occasionally represented in paintings [1–6]. An interesting picture entitled "Saint Peter heals the cripple" is exposed at Barberini Palace in Rome. The opera is probably attributed to Monsu' Lucens, a minor artist who worked in the Venetian laboratory of Carlo Saraceni in the early XVII century. The painting is strongly influenced by the realism of Caravaggio's techniques and the new Baroque style. The scene is inspired by "The Acts of the Apostles" (III, 1–8) when Saint Peter and Saint John the Apostle met and healed a cripple in the Jerusalem's Temple. The figure of the suffering personage is particularly described by the artist and the anatomical details of the disease are shown in the foreground. A

clinical examination reveals a congenital deformity to the lower left limb, anterior bowing at the distal third of tibia, oligosyndactyly of toes with complete absence of one ray and the left foot is also twisted. A bandage to the lower leg is drawn probably to cover an ulceration or a skin wound caused by an eventual exposed bone fracture or other anomalies. A probable fibular aplasia or hypoplasia could justify the deformity of the lower leg and the ulceration of skin wound. The right lower limb looks normal and associated anomalies to the upper limbs are difficult to evaluate (**Figure 1**).

After the Renaissance Age, the increasing interest in anatomy and the correlation between various parts of the



**Figure 1:** Saint Peter heals the cripple, by Monsu' Lucens, oil on canvas, [from the Barberini Palace, Rome, Italy].

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human body allowed artists to produce realistic portrayals. As the close relationship between medical science and art, observers expected artworks to be a real illustration of what artists were observing, combining medical and artistic knowledge [4]. The representation of some kind of deformities and anomalies were usually present because this demonstrated the artists' hallmark styles and their ability to reproduce human figures; although generally the rule was to depict the body as natural as possible [5].

Limb malformations affect in about 1 to 1000 newborn [2]. The fibula is the most common long bone associated with a congenital absence [1]. Fibular aplasia can be a part of a malformation syndrome when associated with focal deficiency of the proximal femur and distal digital and/or toe anomalies. Absent/hypoplastic fibulae frequently are associated with an absence of postaxial rays.

Furthermore, fibular aplasia is sometimes associated with shortness or deformity of the extremities as well as growth retardation [8]. In the Online Mendelian Inheritance in Man (OMIM) database, malformation syndromes that have fibular aplasia are summarized into eighteen categories, which include, Fibular Aplasia or Hypoplasia, Femoral bowing and Poly-, Syn- and Oligodactyly (Fuhrmann syndrome, MIM228930), Brachydactyly-Ectrodactyly with Fibular Aplasia or Hypoplasia (Fibular Aplasia with Ectrodactyly, MIM113310) and Fibular Aplasia, Tibial Campomelia, and Oligosyndactyly syndrome (FATCO syndrome, MIM246570) [1, 3]. The latter two disorders seem to be similar and do not show facial anomalies.

Although foot deformities are difficult to be identified and classified in paintings [7], especially without radiologically examination, we can consider that the personage portrayed by the artist is affected by FATCO syndrome.

### Funding Statement

There was no funding received for this paper.

### Competing Interests

The authors have no competing interests to declare.

### Author Contributions

Both authors contributed equally to this work.

### Guarantor

Fabio Nicoli is the guarantor.

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**How to cite this article:** Nicoli, F and Lazzeri, D. "Congenital Foot Deformity in Caravaggio's Scholar Painting: A Likely Diagnosis of FATCO Syndrome". *International Journal of Orthoplastic Surgery.* 2018; 1(3), pp. 79–80. DOI: <https://doi.org/10.29337/ijops.23>

**Submitted:** 09 October 2018

**Accepted:** 27 October 2018

**Published:** 14 November 2018

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